

1.0 PURPOSE AND NEED

1.1 PROJECT OVERVIEW

Questar Exploration and Production Company (QEP) has notified the Bureau of Land Management (BLM) Vernal Field Office that they propose to fully develop hydrocarbon resources underlying oil and gas mineral leases within the Greater Deadman Bench oil and gas-producing region (GDBR). The location of the proposed project is shown on Figure 1.1. The lands QEP proposes to develop are either wholly or partially contained within townships T6S to T8S, R21E to R25E, Uintah County, Utah. BLM, as lead federal agency, has determined that the approval of the proposed project constitutes a major federal action requiring the development of an Environmental Impact Statement (EIS).

The mineral leases within the GDBR have been obtained by QEP from the United States Government and the State of Utah and grant certain rights to explore, develop, and produce the oil and gas resources underlying such leases, granting ingress and egress to such leases, and retaining a Royalty Interest on any production accruing to the benefit of the federal government or the state of Utah. QEP holds valid federal, state, and private oil and gas leases in the GDBR; these leases grant contractual and property rights from the United States, the State of Utah, and the private mineral landowners to QEP for the purpose of developing oil and natural gas resources.

1.2 PURPOSE AND NEED

The proposed action is approval of QEP's proposed project. The purpose of BLM's action is to respond to QEP's proposal and to facilitate action on future plans related to this proposal. Any additional environmental analysis and documentation will tier to this document. The purpose of QEP's proposed project is to extract and transport oil and natural gas, at a profit, from the portions of the GDBR leased by its companies.

Increased development of natural gas and oil in an environmentally responsible manner is necessary to satisfy federal energy policy (U.S. Department of Energy [DOE], 2004). The proposed project also would provide a source of clean-burning energy. BLM's oil and gas leasing programs encourage development of domestic oil and gas reserves and the reduction of U.S. dependence on foreign energy sources. Private exploration and development of federal oil and gas reserves are integral parts of BLM's oil and gas leasing programs under the authority of the Mineral Leasing Act of 1920, as amended by the Federal Land Policy and Management Act (FLPMA) of 1976 the Federal Onshore Oil and Gas Leasing Reform Act of 1987, and the Energy Policy Act of 2005.

Natural gas and oil are widely considered essential to supplying the nation's current and future energy needs. Total demand for natural gas is projected to increase at an annual average of 1.8 percent from 22.7 trillion cubic feet per day (tcf) to 34.9 tcf by 2025. The increase is primarily because of the rapid growth for electrical generation facilities fueled with natural gas. Total demand for crude oil is projected to increase from 19.0 million barrels per day (mbd) to 28.3 mbd by 2025. Crude oil projections are based upon international economics. As a result, DOE projects that the demand could range from 25.6 to 31.1 mbd by 2025 based upon demand and price (DOE 2004).

BLM objectives for the project are to minimize environmental consequences, as well as to ensure conformance with the objectives of the pertinent land use plans. This EIS addresses the potential effects of implementing a level of oil and gas development. The EIS does not address the particular actions of development with particular and definitive results or definitive locations for natural gas facilities within the GDBR. For the purposes of this EIS, the wells, roads, pipelines, and ancillary facilities detailed in this

EIS are conceptual in plan and location. The final location for each component of this proposed project would be determined through consideration of topographical and geological features and site-specific analyses that would be required for each facility. These analyses would occur when applications, such as an Application for Permit to Drill (APD) or a BLM Right-of-Way (ROW) grant, are filed by QEP for each project component.

Therefore, this EIS serves two purposes. It provides the basis for analyzing and disclosing impacts resulting from the level of development proposed within the GDBR. It also identifies approval conditions and mitigation to be implemented at as-yet undetermined specific development locations within the GDBR.

1.3 EIS PROCESS

QEP submitted a proposal for the GDBR full-field development on April 21, 2003. The BLM Vernal Field Office in Vernal, Utah, as the responsible federal agency, is responding to the proposal by preparing this EIS. The Proposed Action described in Chapter 2 was developed in a cooperative effort between QEP and BLM.

BLM is required by National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) directives to analyze Proposed Actions involving federal lands and leases in terms of their potential impacts on the human environment (40 Code of Federal Regulations [CFR] Parts 1500-1508). BLM is also required (by regulations implementing the Mineral Leasing Act of 1920) to review and act on APDs and attached Surface Use Plans of Operations (SUPO) and to decide on the requirements for surface occupancy provided by the SUPO. BLM also issues ROW grants to construct and operate linear transportation facilities, such as roads and pipelines, across federal lands under Title V of FLPMA and the Mineral Leasing Act.

In anticipation of any potential environmental consequences resulting from the Proposed Action or Alternatives, as detailed in the analysis of impacts on the human environment, another responsibility of the BLM is to establish reclamation provisions (i.e. a Bond), in the event that an oil and gas operator fails to complete adequate reclamation efforts on facilities and disturbed lands. Bonds are required for oil and gas operations on federal leases to indemnify the government for safe rehabilitation, royalty payments, and civil penalties, and are also required for ROWs on federal lands.

This EIS provides BLM with information upon which to base a final decision regarding the Proposed Action. Scoping issues and concerns raised by the public and concerned agencies drove the development of Alternatives and focused the impact analysis process. This EIS documents the analysis of impacts that could result from implementation of the Proposed Action or Alternatives and the development of mitigation necessary to reduce or eliminate environmental consequences. It does not contain final decisions made regarding the Proposed Action and Alternatives.

1.4 DECISIONS TO BE MADE AFTER THE EIS PROCESS

The decisions regarding the Proposed Action and Alternatives will be documented in the Record of Decision (ROD) signed by the Vernal Field Office Manager. The BLM decision will apply only to public lands and leases. Decisions by state, private, and Tribal jurisdictions to issue or not issue approvals related to this Proposed Action may be influenced by the disclosure of impacts available in this analysis.

The ROD associated with this EIS is neither the final review nor the final approval for all actions associated with this project. Although the ROD would approve the project's oil and natural gas development and general location, each project component involving surface disturbance to federal lands

must be analyzed and approved on a site-specific basis by BLM. The method used to evaluate each surface-disturbing activity is detailed in the APD and/or ROW grant. Submission and approval of such applications are required prior to any project construction.

1.4.1 APD Process

The operator can initiate the APD process either by filing an APD or a Notice of Staking (NOS). The NOS would consist of an outline of the operator's proposal, including a location map, and a sketched site plan. The APD includes a surface use program and a drilling program. The detailed information to be submitted for each APD program is identified in Onshore Oil and Gas Order No. 1 and 43 CFR 3162.3.

On BLM-administered land, the BLM is responsible for approving a project component's final APD, the surface use and subsurface drilling programs, and appropriate mitigation for resources as necessary. Prior to approving an APD, the BLM must conduct an environmental review, prepare the documentation, and provide mitigation for surface resources on potentially affected BLM lands. The review consists of an on-site inspection of the locations proposed for the well, access road, and pipelines, and other areas of proposed surface use. The purpose of the on-site inspection is to determine the presence/absence of sensitive resource values and to apply the appropriate mitigating measures. Terms and conditions and standard operating procedures (SOP) previously analyzed as mitigating measures in the NEPA documents associated field development and land use plans. The inspection team would include the BLM's Authorized Officer (AO) or designated representative, the drilling and construction contractor, and a surveyor. After the on-site inspection, if protection of surface or subsurface resource values near the proposed activity is warranted, the project component's APD may be revised or mitigation (e.g., adjusting the proposed locations of well sites, roads, and pipelines to avoid a sensitive resource; identifying specific construction methods to be employed; or identifying reclamation standards) may be added as Conditions of Approval.

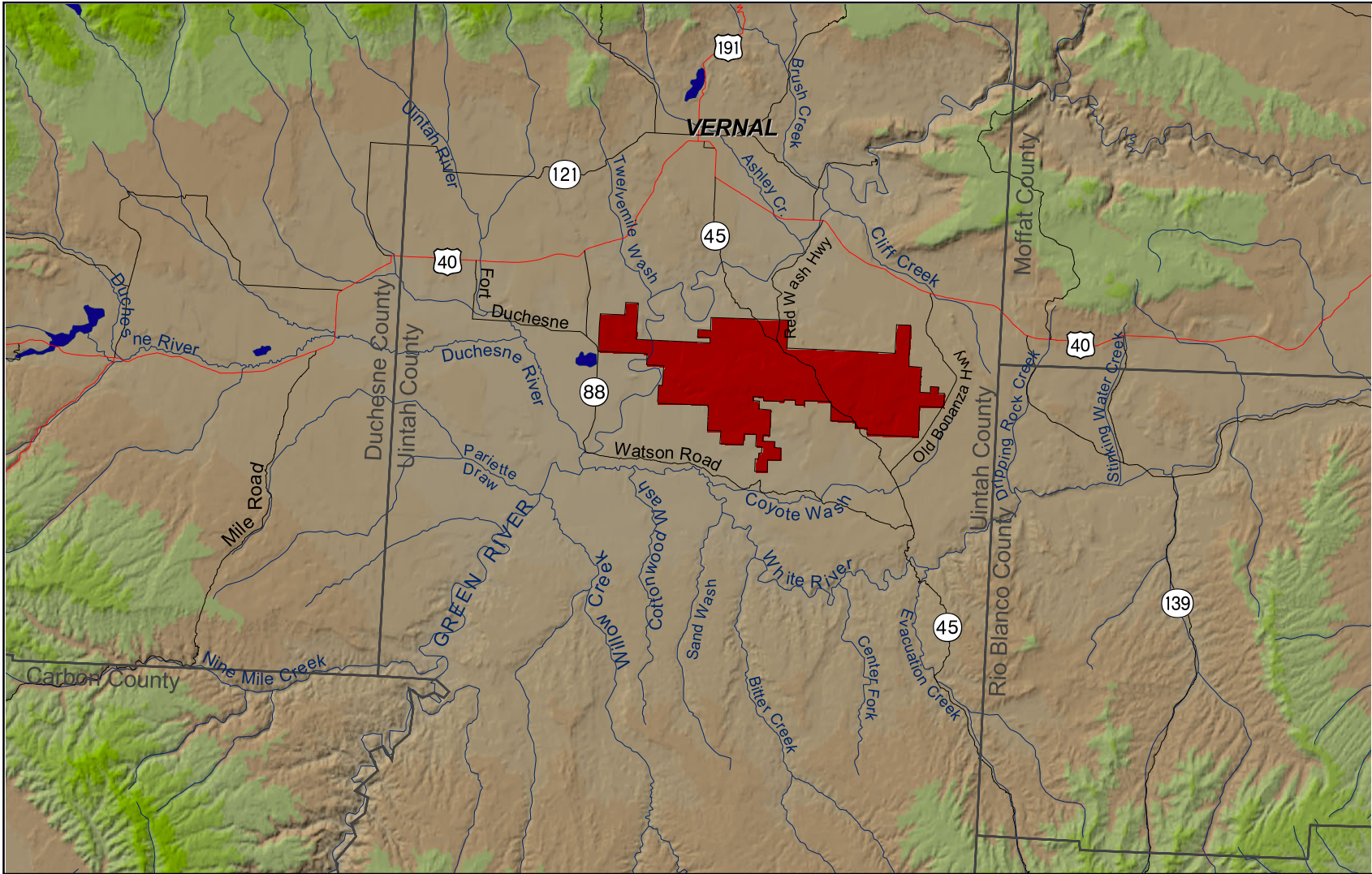
1.4.2 ROW Grant

Operators are required to submit a ROW grant for access to a road or pipeline located on BLM lands yet outside the proposed project's lease or unit. APDs and Sundry Notices are often acceptable as applications for ROW grants for these off-lease facilities if they provide sufficient detail of the entire proposal.

In the case of third party oil/gas transportation pipelines, organizations or individuals who are not oil/gas lessees, yet want to construct, operate, and/or maintain roads, power lines, telephone lines, and/or other facilities within the GDBR, are required to apply for a ROW grant pursuant to Title V of the FLPMA or Section 28 of the Mineral Leasing Act, as amended.

After drilling, routine well operations would not require approval. However, BLM would have approval authority for a variety of related activities. Any changes to an approved APD, certain subsequent well operations (complete details of subsequent well operations are contained in 43 CFR 3162.3-2), disposal of water produced from federal leases (outlined in Onshore Oil and Gas Order No. 7), and all new surface disturbances (e.g., workover pits), would require prior approval. BLM would also need to approve plugging and abandonment of wells, gas venting, gas flaring, and certain measures for handling production. Other permits, approvals, authorizing actions, and consultations required by federal, state, and local agencies are discussed in Section 1.8.

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 Greater Deadman Bench Project Area Boundary

0 5 10 15 20 25
Scale (Miles)

Figure 1-1. Location Map of the Greater Deadman Bench Project Area, Uintah County, Utah.



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1.5 LAND STATUS AND CONFORMANCE WITH PLANS AND STIPULATIONS

1.5.1 Land Status

The GDBR encompasses approximately 98,785 acres of land. Land ownership within this area is divided among the BLM, the Utah State Institutional Trust Lands Administration (SITLA), and various private entities. No Tribal lands are within the GDBR. BLM-administered lands account for approximately 83,864 acres (84.7%) of surface and mineral estate lands within the GDBR. Utah SITLA lands account for approximately 11,448 acres (11.6%) of surface and mineral estate lands within the GDBR. The remaining 3,473 acres (3.7%) consist of various privately owned surface and mineral estate lands within the GDBR. QEP currently holds leases on 79% of the federal, state, and private lands within the GDBR.

1.5.2 Conformance with Federal Management Plans

The Proposed Action and Alternative described in this EIS would take place within the Book Cliffs Resource Area and a small portion west of the Green River in the Diamond Mountain Resource Area. The Book Cliffs Resource Area is currently managed under a Resource Management Plan (RMP) approved in 1985 (BLM 1985). The Diamond Mountain Resource Area is managed under an RMP approved in 1994 (BLM 1994). The management objectives of both current RMPs include leasing oil and gas, tar sands, oil shale, and Gilsonite, while protecting or mitigating other resource values. The Proposed Action and Alternatives presented in this EIS are consistent with the current management decisions set out in these documents.

A revision of both RMPs is currently being prepared that will consolidate all management activities of the entire Vernal Resource Area. A draft of the revision was issued on January 4, 2005. Until decisions are finalized, the plan has no official status; however impacts on the values and resources identified during the planning effort are addressed in this EIS. The decision on this field development would not preclude any alternatives being considered in the Vernal RMP effort.

The Coyote Basin ACEC would not be precluded from selection under any alternative, as all Draft RMP alternatives consider the same mineral management prescriptions that are in place under the Book Cliffs RMP. The value for which the ACEC was nominated is the white tailed prairie dogs and their habitat. The impacts to white tailed prairie dogs and their habitat are disclosed in section 4.6 of the Final EIS.

The portion of the Green River that is within the boundaries of the GDBR has been determined to be eligible as a Wild and Scenic River with a tentative classification of recreational. The BLM Manual 8351 Wild and Scenic Rivers specifies in section .32 (A) (3) that Recreational river areas are those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. Parallel roads or railroads, existence of small dams or diversions can be allowed in this classification. A recreational river area classification does not imply that the river will be managed or prioritized for recreational use or development. However, proposed mineral management is less restrictive under all alternatives in the Draft RMP than currently exist under the Book Cliffs RMP. In addition, no new development is proposed within the eligible WSR segment of the river. Development is proposed on private land adjacent to the river, but the WSR designation would not include those lands.

1.5.3 Consistency with Local Plans

The Proposed Action is also consistent with the Uintah County General Plan (Plan) (Uintah County 1996) and the Public Lands County Policy adopted August 23, 2003. The Plan generally indicates support for development proposals in its emphasis of multiple-use public land management practices and its emphasis of responsible use and optimum utilization of public land resources. As used in the Plan, multiple-use is defined as including, but not limited to, the following historically and traditionally practiced resource uses: grazing, recreation, timber, mining, oil and gas development, agriculture, wildlife habitat, and water resources as they become available or as new technology allows.

The State of Utah does not have planning documents for the vicinity of the Proposed Action.

1.5.4 Lease Stipulations

BLM has issued leases with stipulations to QEP for approximately 25 percent of the GDBR. Many leases were issued before the Book Cliffs RMP and therefore do not contain stipulations other than the standard lease terms at the time of issuance. The stipulations in effect are summarized below for those leases with stipulations. Complete information about the proponent's leases and their associated stipulations is available for review at BLM, Vernal Field Office and Utah State Office.

- No surface disturbance during crucial pronghorn kidding activities May 15 to June 20;
- Ferruginous hawk and golden eagle protection (according to Appendix 2 of Diamond Mountain RMP);
- No surface occupancy within 600 ft (200 meters) of live water;
- Seasonal restrictions for raptors and habitat;
- Protect burrowing owl and habitat from surface disturbance;
- Protection of riparian vegetation and the floodplain of Antelope Draw;
- No Surface Occupancy to protect designated public water reserve (Book Cliffs RMP and EIS pg. 123);
- In critical to severe soil erosion areas, may prohibit surface disturbing activities during wet and muddy periods;
- No Surface Occupancy within 100 meters of riparian vegetation;
- Lease Notice - Habitat containing federally listing plant *Astragalus equisolensis*; and
- Lease Notice - Federally listed plant *Sclerocactus glaucus*.

1.6 PUBLIC INVOLVEMENT/SCOPING OF ISSUES

From November 14, 2003 through February 4, 2004, BLM conducted public and internal scoping to solicit input and identification of environmental issues and concerns associated with the proposed QEP Project. On December 9, 2003, a briefing of the Proposed Action was made to the State of Utah Resource Development Coordinating Committee (RDCC). A Notice of Intent (NOI) to prepare the EIS was published in the Federal Register on December 19, 2003. BLM then prepared a scoping information packet and provided copies of it to federal, state, and local agencies, as well as members of the general public. BLM sought public involvement from the following North American Tribes: Southern Ute Tribe,

the Navajo Nation, the Paiute Indian Tribe of Utah, the Zuni Pueblo, the Ute Indian Tribe, the Shoshone-Bannock Tribes, the Northern Ute Tribe, the Hopi Tribe and the Ute Mountain Tribe. These North American Tribes have stated an interest in and/or declared cultural ties to the project area. Announcements of the scoping opportunities were sent to various newspapers (Vernal Express, Uintah Basin Standard, Deseret News, Denver Post and Salt Lake Tribune), the local Vernal radio stations, and Channel 6, the local Vernal television station. BLM conducted a public scoping and information open house at the Uintah County Building in Vernal, Utah on January 14, 2003.

1.6.1 Identified Issues

Written comments were received during the scoping comment period that ended February 4, 2002. Public response to the notices and meetings included 11 letters from the following agencies, organizations, and people:

- National Park Service, Intermountain Region, Denver, Colorado;
- Western Resource Advocates, Salt Lake City, Utah (representing Center for Native Ecosystems, Southern Utah Wilderness Alliance, Living Rivers, Utah Rivers Council);
- U.S. Geological Survey, Salt Lake City, Utah;
- Resource Development Coordinating Council, Salt Lake City, Utah (representing the State of Utah);
- The Hopi Tribe, Kykotsmovi, Arizona;
- The Paiute Indian Tribe of Utah, Cedar City, Utah;
- Uintah Basin Council of Governments, Roosevelt, Utah;
- Uintah County Commission, Vernal, Utah;
- U.S. Fish and Wildlife Service, West Valley City, Utah; and
- Southern Ute Indian Tribe, Ignacio, Colorado.

The environmental issues identified via the scoping process for the proposed project are identified below:

Issue 1: The GDBR level of development should be consistent with the existing and relevant land management plans.

Issue 2: The effects of the proposed development on soils and soil erosion potential in the project area.

Issue 3: The effects of the proposed development on air quality and visibility within the project area and cumulatively in the region.

Issue 4: The effects of the proposed development on surface water and groundwater in the project area.

Issue 5: The effects of the proposed development on the introduction and spread of noxious weeds.

Issue 6: The effects of the proposed development on vegetation communities and fragmentation of communities.

- Issue 7:* The effects of the proposed development on grazing allotments and rangeland resources in the Project Area.
- Issue 8:* The effects of the proposed development of gas resources on wildlife and wildlife habitat.
- Issue 9:* The effects of the proposed development on fisheries and aquatic habitats.
- Issue 10:* The effects of the proposed development on special-concern species, including threatened, endangered, candidate, or sensitive species of plants and animals.
- Issue 11:* The economic effects of the proposed development.
- Issue 12:* The analysis of the proposed development on traffic and the transportation plan in the project area.
- Issue 13:* The EIS should adequately address the cumulative impacts of the proposed project plus other oil and gas development projects in the region.
- Issue 14:* The effect of the proposed project on cultural resources.
- Issue 15:* A reasonable range of alternatives should be considered.
- Issue 16:* The effect of noise from projected-related activities.
- Issue 17:* The implementation and monitoring of mitigation should be considered.
- Issue 18:* The effect of the project on recreation opportunities.

No additional issues were identified during the course of the meetings.

1.7 CRITICAL ELEMENTS ANALYSIS

The BLM requires that potential impacts be addressed for the following critical elements of the human environment during the NEPA process (BLM 1988a):

Water Quality	Flood Plains
Wetlands/Riparian Zones	Air Quality
Farmlands, Prime/ Unique	Migratory Birds
Threatened and Endangered Species	Cultural Resources
Paleontological Resources	Areas of Critical Environmental Concern (ACECs)
Wild and Scenic Rivers	Wilderness Areas/Wilderness Study Areas
Native American Religious	Native American Trust Resources
Hazardous Materials/Waste	Environmental Justice

Of the 17 critical elements required to be addressed, ACECs, prime or unique farmlands, designated wilderness, WSAs, and wild and scenic rivers do not occur within the GDBR. Also, there are no interests or properties in the GDBR held in trust for Tribes by the U.S. government. Environmental Justice and Native American Religious Concerns were not identified as elements for analysis in this EIS.

1.8 AUTHORIZING ACTIONS

Federal, state, county, and local permitting actions required to implement any of the Alternatives would generally be the same for any Alternative selected. These permit requirements, which are listed in Table 1-1, represent most of the permitting actions required for the QEP project, but the list is not necessarily comprehensive. Also note, many of the below listed permits address site-specific actions, so that the need for those permits will not be fully known until the site specific proposal (APD, Sundry Notice, or Right of Way) is received.

Table 1.1. Major Permits, Approvals and Authorizing Actions Required for the Proposed QEP Deadman Bench Oil and Gas Development Project

Issuing Agency/Permit Approval Name	Nature of Permit Action	Applicable Project Component
<i>DOI – Bureau of Land Management</i>		
Permit to Drill, Deepen, or Plug Back (APD) and Sundry Notice, plugging and abandonment, venting, and flaring	Controls drilling and production for oil and gas on federal onshore leases	Wells and production facilities
ROW Grant and Temporary Use Permit	ROW grant on BLM-managed lands	Oil and gas pipelines, roads, facilities, etc. on BLM-managed lands.
Cultural Resource Use Permit	Archaeological surveys and limited testing on public lands. Archaeological data recovery (excavation) of sites on public lands	All surface-disturbing activities
Paleontological Resource Use Permit	Survey and limited surface collection during site field work on public lands	Surface-disturbing activities
Pesticide Use Permit	Control of pests	Wells, roads, and ancillary facilities
National Noxious Weed Act Compliance	Controls noxious weeds	Any occurrence of noxious weeds on and near project facilities
Material Sales	Sales of sand, gravel, and riprap	Construction activities
<i>U.S. Environmental Protection Agency</i>		

Issuing Agency/Permit Approval Name	Nature of Permit Action	Applicable Project Component
Underground Injection Control Permit	Controls drilling of underground water injection wells for oil waterflood operations	Drilling and operating water injection wells
New Source Review (NSR) Permit; Prevention of Significant Deterioration (PSD)	Controls emissions from new or modified sources	All pollutant emission sources and construction activities associated with Proposed Action or Alternative
Underground Injection Control Permit	Regulates underground disposal wells	Underground disposal wells
Utah Pollutant Discharge Elimination System (UPDES) Permit	Authorizes discharge of pollutants to surface waters of the state	Any point-source surface discharge
UPDES General Permit for Storm Water Discharges	Controls discharge of stormwater pollutants associated with industrial and construction activities	Construction activities disturbing more than five acres of land; and gas production facilities that have had a discharge of a reportable quantity
<i>U.S. Department of Army Corps of Engineers</i>		
Permit to Discharge Dredged or Fill Material	Authorized placement of fill or dredged material in waters of the United States or adjacent wetlands	All surface disturbing activities affecting waters of the United States or wetlands, such as roads and pipeline crossings; Waters of the U.S. include streams, lakes, playas, wetlands, and other identified aquatic resources
<i>DOI – U.S. Fish and Wildlife Service</i>		
Endangered Species Act Compliance (Section 7)	Protects threatened and endangered species	Any activity potentially affecting listed or proposed threatened or endangered species
Migratory Bird Treaty Act	Protects migratory birds	All ground-disturbing activities
Bald Eagle Protection Act	Protects bald and golden eagles	All ground-disturbing activities

Issuing Agency/Permit Approval Name	Nature of Permit Action	Applicable Project Component
<i>Advisory Council on Historic Preservation</i>		
Cultural Resource Compliance (Section 106)	Protects cultural and historic resources; coordinated with the Utah State Historic Preservation Officer (SHPO)	All ground-disturbing activities
<i>U.S. Department of Transportation</i>		
Construction and operation of natural gas, crude oil, and water pipelines	Prescribes minimum safety requirements for pipeline facilities and the transportation of gas, including pipeline facilities	Natural gas pipelines
<i>Utah Department of Transportation</i>		
Transport Permit	Authorizes oversize, overlength, and overweight loads	Transportation of equipment and materials on state highways
Encroachment Permit	Authorized pipeline crossings or access roads tying into state or federal highways	Construction of pipeline across state or federal highways; construction of projects roads that tie into state or federal highways
<i>Utah Department of Environmental Quality</i>		
None		
<i>Utah Division of Water Rights</i>		
Change in Nature of Use Application	Authorizes change of use on water rights	Non-consumptive and consumptive water uses
Stream Alteration Permit	Approves construction plans	Perennial stream crossings
<i>Utah School and Institutional Trust Lands Administration (SITLA)</i>		
Compliance with Rules	Compliance with applicable general and program rules	Facilities on SITLA lands
<i>Utah Division of State History, Antiquities Section</i>		
Antiquities Annual Permit: Blanket Permit to Conduct Archaeological Investigations	Regulates all archaeological investigations on state and private lands	All surface-disturbing activities on state and private lands

Issuing Agency/Permit Approval Name	Nature of Permit Action	Applicable Project Component
Antiquities Projects Permit (Excavation)	Regulates all archaeological excavations on state and private lands	All surface-disturbing activities on state and private lands
<i>Utah Division of State History Preservation Section (SHPO)</i>		
Section 106 Cultural Resources Consultation	Determines significance of cultural resources potentially affected by surface-disturbing activities	All surface-disturbing activities
<i>Utah Division of Oil, Gas, and Mining</i>		
Permit to Drill, Deepen, or Re-enter and Operate an Oil and Gas or Disposal Well	Approves drilling on all lands within the state	Wells (production and disposal)
Disposal facility permit	Waste disposal	Waste and disposal facilities
Safety Regulations for Oil and Gas Activities	Regulates oil and gas activities to protect public safety	All Proposed Action and Alternative components
Permit to Flare Gas	Regulates flaring up to 30 days of testing or 50 MMcf, whichever is less	Flaring of gas wells
<i>Uintah County</i>		
Conditional Use Permit	Authorizes extraction and processing on private lands	Any project activities in residential or critical environment zones
Road Use Permit	Authorizes overweight and overlength loads on county roads	Transportation of equipment and materials on county roads
Road Opening Permit	Authorizes pipeline crossings, routing of pipelines parallel to county roads, and tying a project access road into a county road	Pipelines or project roads that cross or intersect with a county road
Solid Waste Ordinance	Regulates disposal of wastes in the County	Construction and operational waste

Issuing Agency/Permit Approval Name	Nature of Permit Action	Applicable Project Component
Building Permit	Controls construction of all structures in the County	Construction of all buildings in Uintah County
Noxious Weed Act Compliance	Controls listed noxious weeds	Any occurrence of noxious weeds on and near project facilities

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